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ELECTRO-DYNAMIC TETHER CONTROL TECHNOLOGY FOR UPSTAGE OF ROCKET
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Abstract

With the increasing frequency of space activities and the continuous increase of the number of spacecraft in orbit the problem of space debris has attracted the attention of all countries in the world. According to statistics, if no measures are taken, space debris will increase at an annual rate of 5 percent. Space debris in low-Earth orbit result in a serious threat to space activities, and the possibility of normal spacecraft colliding with space debris is increasing. These space debris come mainly from the abandoned satellites and upstage of rockets, and it is urgent to deorbit them in order to ensure that the space environment is suitable for safe space activities. In this paper electro-dynamic tether technology is used to control the upstage of rocket deorbit modeling and dynamic analysis of electro-dynamic tether are carried out research and design the electro-dynamic tether control equipment which will be used in Long-march rockets in China. Electro-dynamic tether deorbit technology needn't propellant and which has low quality and fast deorbit speed it is a perfect deorbit method.